

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claim 1 (Previously Presented): A substrate coated with at least one dielectric thin-film layer deposited by magnetically enhanced sputtering or reactive sputtering in the presence of oxygen and/or nitrogen, with exposure to at least one ion beam coming from an ion source, wherein said dielectric layer exposed to the ion beam is crystallized, wherein said dielectric layer has a crystallinity of greater than 90% and an RMS roughness of less than 1.5 nm.

Claim 2 (Previously Presented): The substrate as claimed in claim 1, wherein said dielectric layer deposited on the substrate by sputtering with exposure to the ion beam has an RMS roughness of less than 1 nm.

Claim 3 (Previously Presented): The substrate as claimed in claim 1, wherein the dielectric layer exposed to the ion beam has a roughness at least 20 % less than that of the same dielectric layer not exposed to the ion beam.

Claim 4 (Previously Presented): The substrate as claimed in claim 1, wherein said dielectric layer comprises a metal oxide or silicon oxide, which may be stoichiometric or nonstoichiometric, or comprises a metal nitride or oxynitride or silicon nitride or oxynitride.

Claim 5 (Previously Presented): The substrate as claimed in claim 1, wherein said dielectric layer comprises an oxide of at least one element selected from the group consisting

of silicon, zinc, tantalum, titanium, tin, aluminum, zirconium, niobium, indium, cerium, and tungsten.

Claim 6 (Previously Presented): The substrate as claimed in claim 5, wherein the layer comprises zinc oxide and has a refractive index of less than or equal to 1.95.

Claim 7 (Previously Presented): The substrate as claimed in claim 5, wherein the layer comprises zinc oxide and has a degree of crystallinity of greater than 95%.

Claim 8 (Previously Presented): The substrate as claimed in claim 1, wherein said dielectric layer comprises silicon nitride or oxynitride.

Claim 9 (Previously Presented): The substrate as claimed in claim 1, wherein said layer has an argon content of around 0.2 to 0.6 at%.

Claim 10 (Previously Presented): The substrate as claimed in claim 1, wherein said layer has an iron content of less than or equal to 3 at%.

Claim 11 (Previously Presented): The substrate as claimed in claim 1, wherein said substrate is coated with a multilayer in which a silver layer is placed on top of said dielectric layer exposed to the ion beam.

Claim 12 (Previously Presented): The substrate as claimed in claim 11, wherein another dielectric layer is placed on top of the silver layer.

Claim 13 (Previously Presented): The substrate as claimed in claim 11, wherein the multilayer includes at least two silver layers.

Claim 14 (Previously Presented): The substrate as claimed in claim 11, wherein said substrate has a surface resistance R_s of less than $6 \Omega / \square$.

Claim 15 (Currently Amended): A glazing assembly ~~which may be a double glazing or laminated glazing assembly~~, comprising at least one substrate as claimed in claim 1,
wherein the assembly is either a double glazing assembly or a laminated glazing assembly.

Claim 16-28 (Canceled).

Claim 29 (Withdrawn): An installation for deposition on a substrate, which may be a glass substrate, for the manufacture of the substrate as claimed in claim 1, which includes a sputtering chamber in which at least one dielectric thin-film layer is deposited on the substrate by sputtering, which may be magnetically enhanced sputtering or reactive sputtering in the presence of oxygen and/or nitrogen, with exposure to at least one ion beam, wherein the installation includes, in the sputtering chamber at least one linear ion source capable of creating at least one ion beam.

Claim 30 (Withdrawn): The installation as claimed in claim 29, wherein a linear ion source is placed so as to direct an ion beam onto the substrate, which may be along a direction making a nonzero angle, or an angle of 10 to 80°, with the surface of the substrate.

Claim 31 (Withdrawn): The installation as claimed in claim 29, wherein a linear ion source is placed so as to direct an ion beam onto at least one cathode, which may be along a direction making a nonzero angle, or an angle of 10 to 80°, with the surface of this cathode.

Claim 32 (Previously Presented): The substrate as claimed in claim 1, wherein the substrate is glass.

Claim 33 (Previously Presented): The substrate as claimed in claim 1, wherein said dielectric layer has a crystallinity of greater than 95%.

Claim 34 (Previously Presented): The substrate as claimed in claim 33, wherein said dielectric layer has an RMS roughness of less than 1 nm.

Claim 35 (Previously Presented): The substrate as claimed in claim 1, wherein the at least one ion beam comes from a linear ion source.